

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-013674**Date Inspected:** 03-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Du Zhi Qun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

**BAY 11**

This QA Inspector performed randomly Visual Inspection Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6027 (UT) report for this date. The member is identified as East tower lift 4 Skin D/E corner Backfill plate. The weld designations reviewed are as follows.

ESTL4-2K/L-118, 54,  
NDT Notification No-005655

This QA Inspector observed the following work in progress:

**BAY 11:****SMAW Process:**

This QA Inspector observed ZPMC qualified welding personnel identified as 040667, 040614. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as SD1-STSA4-5-135M-1-47A, 5B. ZPMC CWI

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Identified as Yu Dong Ping, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040656, 046704. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as SD1-STSA4-5-131M-1-48B, 8B, ZPMC CWI Identified as Yu Dong Ping, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040724, 046769. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-139M-1-57, 58, 49,50. ZPMC QC Identified as Xu Jie, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113.

This QA Inspector observed ZPMC qualified welding personnel identified as 202100. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-6-131M-1-25, 26, 37, 38, ZPMC QC Identified as Xu Jie, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2112.

This QA Inspector observed ZPMC qualified welding personnel identified as 041271. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-6-127M-2-5A, ZPMC QC Identified as Xu Jin Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 044541. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-135M-1-6B, ZPMC QC Identified as Xu Jin Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040619. Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate. Joint identified as ESD1-TL5-2B/F-35A, ZPMC CWI Identified as Lilin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-B-U3b.

BAY 10 FCAW Process,

This QA Inspector observed ZPMC qualified welding personnel identified as 057180. Perform Flux Core Arc Welding (FCAW) on Façade channel. Joint identified as ND1-SFSA4-710-1-7, 8, 3, 4, ZPMC QC Identified as Yu Zhi Lai, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132. For more information see below attach photo.

Repair welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 053870. Perform Flux Core Arc Welding (FCAW) on Façade plate. Joint identified as SD1-SFSA4-6A/B-1, ZPMC QC Identified as Yu Zhi Lai, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-1G (1F) Repair.

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This QA Inspector observed ZPMC qualified welding personnel identified as 040367. Perform Flux Core Arc Welding (FCAW) on South tower lift 4 B/C corner diagonal stiffener. Buttering on stiffener 2~4mm, ZPMC QC Identified as Li Peng Fei, with temporary welding repair report. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-3G (3F) Repair.

### Magnetic Particle Testing:

This QA Inspector observed ZPMC Magnetic Particle Testing Inspector, performing MT on Tower strut after buttering and milling on the strut weld area. Strut identified as ND1-A6002-17. For more information see below attach photo.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest phone: 15000422360, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Shailesh

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer